ABSTRACT

According to the present apparatus, on multi-throttle apparatus provided with multiple throttle valves 20 that are respectively disposed in multiple intake passages 11, a throttle shaft 30 that simultaneously opens/closes the throttle valves 20, drive means 50 that drives the throttle shaft 30, and a return spring 60, the driving force of the drive means 50 is applied to an approximate center of the throttle shaft 30, the energizing force of the return spring 60 is applied close to the location to which the energizing force is applied, and bearings 40 are provided in mutual intervals between the multiple intake passages 11 to support the throttle shaft 30. Consequently, torsion of the throttle shaft 30 is prevented, and the throttle valves 20 are opened/closed synchronously without generating a phase shift. Consequently, electronic control is provided for multi-throttle apparatuses applied to engines of two-wheeled vehicles and the like, and the synchronization among throttle valves is secured.

Rec'd PCT/PTO

(12)特許協力条約に基づいて公開された国際出願

(19) 世界知的所有権機関 国際事務局



(43) 国際公開日 2004年4月22日(22.04.2004)

PCT

(10) 国際公開番号 WO 2004/033875 A1

(75) 発明者/出願人(米国についてのみ): 花里 真樹 (HANASATO, Maki) [JP/JP]; 〒250-0055 神奈川県 小

田原市久野 2480番地 株式会社ミクニ 小田原事業所

(51) 国際特許分類7:

(21) 国際出願番号:

PCT/JP2003/013032

F02D 9/02, 9/10

(22) 国際出願日:

2003年10月10日(10.10.2003)

(25) 国際出願の言語:

日本語

(81) 指定国(国内): BR, CN, US.

内 Kanagawa (JP).

(26) 国際公開の言語:

日本語

(84) 指定国 (広域): ヨーロッパ特許 (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR).

(30) 優先権データ: 特願 2002-298524

2002年10月11日(11.10.2002)

添付公開書類:

国際調査報告書

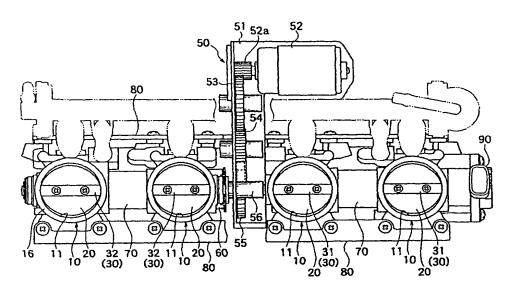
(72) 発明者: および

(71) 出願人(米国を除く全ての指定国について): 株式会 社ミクニ (MIKUNI CORPORATION) [JP/JP]; 〒101-0021 東京都 千代田区外神田 6丁目13番11号 Tokyo (JP).

2 文字コード及び他の略語については、 定期発行される 各PCTガゼットの巻頭に掲載されている「コードと略語 のガイダンスノート」を参照。

(54) Title: MULTIPLE THROTTLE DEVICE

(54) 発明の名称: 多連スロットル装置



(57) Abstract: A multiple throttle device, comprising a plurality of throttle valves (20) disposed in a plurality of intake passages (11), throttle shafts (30) simultaneously opening and closing the throttle valves (20), a drive means (50) driving the throttle shaft (30), and a return spring (60), wherein the drive force of the drive means (50) is allowed to act on the throttle shaft (30) at a generally center position, the energizing force of the return spring (60) is allowed to act on the throttle shaft (30) near an area receiving the drive force, and bearings (40) are installed between the plurality of intake passages (11) to support the throttle shaft (30), whereby since the throttle shaft (30) can be prevented from being twisted, the throttle valves (20) can be opened and closed in synchronism with each other without causing a phase shift, and thus the multiple throttle device used for the engine of a motorcycle can be electronically controlled and the synchronization of the throttle valves can be assured.